

SYSTEM AND METHOD FOR VALIDATING VELOCITIES OF TORQUE GENERATING DEVICES IN A VEHICLE

Abstract

A method for validating engine and motor velocities in a vehicle having an engine and two motors is provided. The method validates the velocities without using two speed sensors for each device. The velocities of the engine and the two motors are first determined, and then mathematically combined using known velocity relationships based on the vehicle architecture. The mathematical combination of the velocities is then compared to a first predetermined speed range, and if the mathematical combination is within the predetermined range, the velocities of the engine and the two motors are validated. If the validation of the engine and the two motors fails, additional equations can be used utilizing additional inputs, including the vehicle speed as measured at the vehicle wheels. In this way, the velocities of one or more of the torque generating devices in the vehicle may be validated.